

### **REMARKS**

Applicants thank the Examiner for the thorough consideration given the claims of the present application. Claims 1, 3 - 5, 7, 8 and 10 - 12 are pending in the application. By this response, claims 1, 4, 10, and 11 are amended, and claim 12 is added. Claims 1, 11, and 12 are independent claims.

### **Claim Objections**

Claim 10 is objected to due to a spelling error. Applicants hereby amend claim 10 to correct this error.

Claims 3 and 4 are objected to as being substantial duplicates of each-other. Applicants note that in the Office Action response of January 29, 2009, claim 4 was incorrectly presented as a duplicate of claim 3. Applicants hereby correct this error. As can be seen from the originally filed claims and the Preliminary Amendment, claim 4 is directed towards metal ion concentration whereas claim 3 discusses ion-added water amount. Applicants therefore respectfully submit that these claims (and all claims depending therefrom) are not substantial duplicates of each-other.

At least in view of the above, reconsideration and withdrawal of these objections is respectfully requested.

### **Claim Rejections - 35 U.S.C. § 103 – Hird and Ando**

Claims 1, 3, 4, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hird (WO 01/071084) in view of Ando et al. (JP 2001-276484). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Prior Art

Hird teaches a load balance correction process for a washing machine. Specifically, at the end of the wash cycle, rinse water is pumped from the drum while the drum slowly rotates, and the drum then performs a distribute operation (Hird; Fig. 4, step 202) in which the drum is rotated at a speed of around 83rpm (Hird; page 7, lines 14-16). If, after the distribute operation, the load is still deemed to be out of balance, further drum rotations are attempted as part of a redistribute operation (Hird; page 8, lines 19 – 31; Fig. 4, step 208). Although Hird specifically teaches adding water during the slow rotation, there is no teaching or suggestion that water is added during or after the distribute or redistribute operations.

Ando is relied upon to teach supplying silver ions in washing water during the last round of a washing process (Ando; Para 0004). Ando does not teach or suggest supplying metal ions in washing water repeatedly or otherwise providing water containing metal ions during anything but the “last round of a washing process” composed of multiple washing steps (Ando; Para 0004). Ando also does not teach or suggest the possibility of selectively supplying metal ions in washing water.

Claim 1

Independent claim 1 pertains to a washing machine having “a control unit configured to operate such that, on recognizing that the sensing portion has sensed imbalance during spin-drying rotation, if before the spin-drying rotation the ion eluting portion was controlled so as not to supply metal ions to the laundry tub, the control unit performs a first balance correction

rinsing in which the control unit controls the water supply unit and the ion eluting portion to supply water containing no metal ions to the laundry tub and controls the agitating unit to perform agitation, and if before the spin-drying rotation the ion eluting portion was controlled so as to supply metal ions to the laundry tub, the control unit performs a second balance correction rinsing in which the control unit controls the water supply unit and the ion eluting portion to supply water containing metal ions to the laundry tub and controls the agitating unit to perform agitation.”

A control unit configured to perform the above-described tasks offers the benefits of suppressing a reduction caused by balance correction rinsing in the amount of metal ions attached to the laundry in a step before spin-drying rotation and suppressing unnecessary wearing of the ion eluting portion.

Claim 1 therefore requires not only multiple instances of ionized water use, but also a controller that controls an ion eluting portion such that it may be selectively activated. Even if Ando and Hird could be combined in the manner suggested by the Office Action (which Applicants do not admit), neither teaches or suggests a control unit that only activates the ion eluting portion for a balance correction rinse with ion-added water in situations where ion-added water was previously supplied during the washing process as required by independent claim 1.

#### Hird Does Not Teach Rinsing During Balance Correction

Insofar as Hird teaches balance correction, it is purely a rotation-based process to accomplish some level of load redistribution. Hird is completely silent with respect to the use of water (ionized or not) during the load redistribution operation. Since Hird specifically discusses

adding water to the washing machine drum during other operations, one of ordinary skill in the art would readily infer that not discussing the use of additional water during load redistribution indicates that Hird's load redistribution is a "dry" process that does not indicate the further addition of water into the washing machine. This inference is reinforced by the fact that Hird teaches the use of a slower final spin speed if load redistribution is not successful. Hird therefore relies only on the rotation of the washing machine drum(s) for load redistribution and does not introduce more water into the washing machine between load distribution (Hird; Fig. 4, step 202) and final rinse (Hird; Fig. 4, step 222).

Hird therefore cannot teach or suggest a controller that "performs a second balance correction rinsing in which the control unit controls the water supply unit and the ion eluting portion to supply water containing metal ions to the laundry tub and controls the agitating unit to perform agitation" as required by independent claim 1 because Hird does not teach or suggest any form of water supply control during balance correction (i.e. load redistribution). Furthermore, Ando is not relied upon, nor can it properly be relied upon, to remedy this deficiency of Hird.

#### Ando Does Not Teach Selective Ion Supply

Insofar as Ando teaches supplying water with metal ions, there is no teaching or suggestion therein that this metal ion supply is selectively controlled. Ando teaches that the supply of silver ions is governed by a controller that times the delivery of metal ions and maintains an ion concentration of between 3 and 50 ppb in the washing water. Ando does not teach or suggest that metal ions may be supplied for one load of laundry but not supplied for

another load of laundry in the same machine. This is in direct conflict with the control unit of claim 1, which “controls the water supply unit and the ion eluting portion to supply water containing metal ions to the laundry tub” such that ionized water is used during balance correction if ionized water was used earlier in the washing process and “controls the water supply unit and the ion eluting portion to supply water containing no metal ions to the laundry tub” such that non-ionized water is used during balance correction if ionized water was not used earlier in the washing process. Furthermore, Hird, lacking any teaching of water addition during load redistribution, is not relied upon and cannot properly be relied upon to remedy this deficiency of Ando.

#### Summary

At least in view of the above, Applicants respectfully submit that Hird and Ando are both separately and jointly deficient in their teaching. Neither reference, taken either alone or in combination (assuming the references may be combined, which Applicants do not admit) establishes *prima facie* obviousness of independent claim 1 or any claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### Claim 11

Independent claim 11 pertains to a washing machine having “a selection unit for selecting between a first mode in which the eluted metal ions are not to be added to the water supplied to the laundry tub prior to a spin-drying rotation, and a second mode in which the eluted metal ions are to be added to the water supplied to the laundry tub prior to the spin-drying rotation, and

outputting a selection signal” and “a control unit configured to operate such that, on recognizing that the sensing portion has sensed imbalance during the spin-drying rotation, if the selection signal is recognized to be indicating the first mode, the control unit performs a first balance correction rinsing in which the control unit controls the water supply unit and the ion eluting portion to supply water containing no metal ions to the laundry tub and controls the agitating unit to perform agitation, and if the selection signal is recognized to be indicating the second mode, the control unit performs a second balance correction rinsing in which the control unit controls the water supply unit and the ion eluting portion to supply water containing metal ions to the laundry tub and controls the agitating unit to perform agitation.”

Applicants respectfully submit that Hird and Ando are deficient with respect to claim 11 for at least the same reasons as set forth with respect to claim 1. Specifically, Hird fails to teach or suggest a load balance correction process where water is added to the washing machine and Ando fails to teach or suggest a selectively operable ion eluting portion. Furthermore, neither Hird nor Ando any teaching or suggestion of a controller that controls water supply and an ion eluting portion based on a selection signal from a selection unit. Hird discloses no such relationship between any switch or mode selection unit and a controller, and Ando is completely silent in this regard, being directed only toward solutions that always introduce metal ions into a washing process.

At least in view of the above, Applicants respectfully submit that Hird and Ando are both separately and jointly deficient in their teaching. Neither reference, taken either alone or in combination (assuming the references may be combined, which Applicants do not admit)

establishes *prima facie* obviousness of independent claim 11 or any claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### Dependent Claims

Applicants respectfully submit that claims 3, 4 and 10 are allowable at least by virtue of their dependency from independent claim 1. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### **Claim Rejections - 35 U.S.C. § 103 – Hird, Ando, and Jeon**

Claims 5, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hird in view of Ando in further view of Jeon (U.S. 6,286,344). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Applicants respectfully submit that claims 5 and 7 are allowable at least by virtue of their dependency from independent claim 1. Applicants further submit that Jeon is not relied upon, nor can it properly be relied upon, to remedy the deficiencies of Hird and Ando. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### New Claims

Applicants respectfully submit that new claim 12 is allowable at least for the same reasons as set forth with respect to claims 1 and 11.

**Conclusion**

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and objections, and allowance of the pending claims are earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Naphtali Matlis (Reg. No. 61,592) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By  4/25/12

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